

CLAIMS:

What is claimed is:

1. A cable certification device for testing network cabling, the cable certification device comprising:
 - a test module operable to promote testing of at least one channel of the network cabling;
 - a connector communicating with the test module;
 - an adapter operable to communicate with the network cabling;
 - a contact coupled to the adapter to communicate with the network cabling and operable such that the connector contacts the contact to enable communication between the test module and the network cabling.
2. The cable certification device of Claim 1, further comprising:
 - a device housing having a coupling portion, connector extending at least partially from a portion of the device housing such that the connector contacts the contact when the adapter is coupled to the device housing; and
 - a mating portion coupled to the adapter to promote connection to the network cabling.
3. The cable certification device of Claim 2, wherein the test module is retained by the adapter.

4. The cable certification device of Claim 2, wherein the test module is retained by the housing.
5. The cable certification device of Claim 2, wherein the adapter includes a printed circuit board having circuitry operable to communicate with the network cabling and wherein the contact is further defined as a trace on the printed circuit board circuitry.
6. The cable certification device of Claim 1, wherein the contact is further defined as a contact location on the printed circuit board circuitry.
7. The cable certification device of Claim 1, wherein the connector is further defined as a biased connector.
8. The cable certification device of Claim 7, wherein the biased connector is further defined as a push-pin.
9. The cable certification device of Claim 8, wherein the push-pin is further defined as a shaft and a biasing mechanism in communication with the shaft, the shaft having a first end opening wherein a pin bias by the biasing mechanism resiliently extends from the shaft.
10. The cable certification device of Claim 9, wherein the pin portion of the push-pin is further defined as a removable pin.

11. The cable certification device of Claim 2, wherein the mating portion is further defined as a cable coupleable to the adapter and having a female jack on one end thereof for connection to the network cabling.
12. The cable certification device of Claim 2, wherein the mating portion is further defined as a cable coupleable to the adapter and having a male plug on one end thereof for connection to the network cabling.
13. The cable certification device of Claim 2, wherein the test module includes a circuit board coupled to the device housing and includes test circuitry operable to test the integrity of the at least one channel of the network cabling.
14. The cable certification device of Claim 13, wherein the test circuitry is operable to generate and transmit a test signal, via the connector, to test the integrity of the at least one channel of the network cabling.
15. The cable certification device of Claim 13, wherein the test circuitry is operable to receive and measure, via the connector, a test signal transmitted via the network cabling to test the integrity of the at least one channel of the network cabling.
16. The cable certification device of Claim 2, wherein the test module includes a circuit board coupled to the device housing and includes a processor programmed to transmit, via the connector, a test signal to be received and measured by another cable certification device coupled to the network cabling to test the integrity of the at least one channel of the network cabling.

17. The cable certification device of Claim 16, wherein the processor is further programmed to receive, via the connector, and measure a test signal transmitted via the network cabling to test the integrity of the at least one channel of the network cabling.
18. The cable certification device of Claim 2, further including a latch coupled to lock the adapter to the device housing.
19. The cable certification device of Claim 18, further including a release mechanism coupled to the latch and operable to release the latch to uncouple the adapter housing from the device housing.

20. A measurement connector system for connecting a device to a local area network, the measurement connector system comprising:

- a device housing having a coupling portion, the device housing retaining circuitry operable to measure signals from at least one channel of the local area network cabling;
- a first biased contact extending from the device housing and communicating with the circuitry of the device;
- a second biased contact extending from the device housing and communicating with the circuitry of the device;
- an adapter housing configured to couple with the coupling portion of the device housing;
- a mating portion coupled to the adapter housing to promote connection to the local area network cabling;
- a first contact operable to communicate with the at least one channel of the local area network cabling, via the mating portion, and coupled to the adapter housing such that the first biased contact contacts the first contact when the adapter housing is coupled to the device housing; and
- a second contact operable to communicate with the at least one channel of the local area network cabling, via the mating portion, and coupled to the adapter housing such that the second biased contact contacts the second contact when the adapter housing is coupled to the device housing.

21. A measurement connector system of Claim 20, wherein the first and second biased contacts are further defined as a first and second push-pins.

22. The measurement connector system of Claim 21, wherein the first and second push-pins are coupled to a circuit board retaining the circuitry such that the first push-pin is spaced a distance from the coupling of the second push-pin to the circuit board, the distance determined using an inductance component related to the structure of the first and second push-pins and a capacitance component related to the distance between the first and second push-pins to achieve a desired impedance related to an impedance of the at least first channel of the network cabling.
23. The measurement connector system of Claim 21, wherein the first and second push-pins and device housing are configured to achieve a desired impedance related to an impedance of at least a first channel of the network cabling.
24. The measurement connector system of Claim 21, wherein a portion of the capacitance component is based on a dielectric component related to a material provided between the first and second push-pins.
25. The measurement connector system of Claim 22, further comprising:
- a third push-pin extending from the device housing and communicating with the circuitry of the device; and
 - a fourth push-pin extending from the device housing and communicating with the circuitry of the device, third and fourth push-pins positioned relative to the first and second push-pins to reduce cross-talk between channels of the network.

26. The measurement connector system of Claim 21, further comprising shielding provided to reduce cross-talk between channels of the local area network cabling being measured.

27. A connector assembly for connecting a device to a local area network adapter for connection to a local area network, the connector system comprising:
- a device housing having a mating portion configured to couple to the local area network adapter;
 - a test module retained by the device housing and operable to receive communication from at least one channel of the local area network cabling;
 - a first biased contact coupled to the test module, the first biased contact extending from the device housing such that the first biased contact is electrically coupleable to the local area network adapter and operable to communicate with a first portion the at least first channel of the local area network cabling when the local area network adapter is coupled to the device housing; and
 - a second biased contact coupled to the test module and spaced a distance from the first biased contact, the second biased contact extending from the device housing such that the second biased contact is electrically coupleable to the local area network adapter and operable to communicate with a second portion the at least first channel of the local area network cabling when the local area network adapter is coupled to the device housing.
28. The connector assembly of Claim 27, wherein the first and second biased contacts are further defined as pins.

29. The connector assembly of Claim 27, wherein the network cabling includes a second channel and wherein the connector system further includes:
- a third biased contact coupled to the test module; and
 - a fourth biased contact coupled to the test module and communicating with at least a second channel of the local area network cabling such that the third and fourth biased contacts are positioned relative to the first and second biased contacts to minimize the interaction of an electromagnetic field generated by the first and second biased contacts and an electromagnetic field generated by the third and fourth biased contacts.
30. The connector assembly of Claim 29, wherein the first and second biased contacts are positioned on the test module along a line that is at about a 45 degree angle relative to a horizontal line and wherein the third and fourth biased contacts are positioned on the test module adjacent the first and second biased contacts along a line that is at about a 45 degree angle relative to the horizontal line.
31. The connector assembly of Claim 29, wherein the first and second biased contacts are positioned adjacent to one another on the test module along a line that parallel to a horizontal line and wherein the third and fourth biased contacts are positioned on the test module adjacent the first and second biased contacts and along a line that is at about a 90 degree angle relative to the horizontal line.
32. The connector assembly of Claim 31, further comprising a fifth and sixth biased contacts coupled to the test module to communicate with the circuitry associated with a portion of a third channel of the network cabling, the fifth and sixth contacts

positioned on the test module adjacent the third and fourth biased contacts and along a line that is parallel to the horizontal line.

33. The connector assembly of Claim 27, wherein the desired impedance is substantially similar to an expected impedance of the at least first channel of the network cabling.
34. The connector assembly of Claim 27, wherein the desired impedance is based on the impedance of the at least first channel of the network cabling.
35. The connector assembly of Claim 27, wherein the desired impedance is about 100 ohms wherein the impedance of the at least first channel of the network cabling is about 100 ohms.
36. The connector assembly of Claim 27, wherein the first and second biased contacts are further defined as spring-loaded push-pins.
37. The connector assembly of Claim 27, wherein the distance between the first and second biased contacts determined using an inductance component related to the structure of the first and second biased contacts and a capacitance component related to the distance between the first and second biased contacts to achieve a desired impedance related to an impedance of the at least first channel of the local area network cabling.

38. A method of managing field interaction through orientation, comprising:
- providing a device for communicating with a channel of a network;
 - providing a first biased contact coupled to the device for communicating with the first channel;
 - providing a second biased contact for communicating with the first channel;
 - determining an impedance component of the channel of the network;
 - determining an inductance component of the channel of the network;
 - positioning the second bias contact coupled to the device a distance from the first biased contact, the distance between the first and second biased contacts determined using the inductance component based on a structure of the first and second biased contacts and a capacitance component related to the distance between the first and second biased contacts to achieve a desired impedance related to the impedance of the first channel of the network.
39. The method of Claim 38, further comprising:
- providing a second contact coupled to the device;
 - providing a third contact coupled to the device;
 - locating the third and fourth biased contacts positioned relative to the first and second contacts to minimize the interaction of an electromagnetic field generated by the first and second contacts and an electromagnetic field generated by the third and fourth contacts.